

CLAIMS

What is claimed is:

1. A method for operating a workflow, applied to a system for operating a workflow having a terminal device, a network server and at least one service server, for conducting an electronic workflow for an enterprise based on a server/client architecture in a network environment; the method comprising the steps of:

- (1) inputting keywords to an inquiry form via a user at the terminal device in the use of a browser together with an element of component type provided by the network server so as to conduct a request for inquiring a document;
- (2) transmitting the inquiry request via the browser to the network server over the network;
- (3) transmitting the inquiry request via the network server to a document processing center of the network server after receiving the inquiry request, and generating a response corresponding in category to the inquiry request and initiating an associated service server via the document processing center;
- (4) searching in a service database of the service server for the document to be inquired via a document inquiring program of the document processing center, and transmitting a searched result of the inquired document to the document processing center;
- (5) transmitting a form containing the searched result of the inquired document via the document processing center to the terminal device over the network; and
- (6) displaying a form containing the searched result of the inquired document via the browser of the terminal device.

2. A method for operating a workflow, applied to a system for operating a workflow

having a terminal device, a network server and at least one service server, for conducting an electronic workflow for an enterprise based on a server/client architecture in a network environment; the method comprising the steps of:

- (1) inputting keywords to a browsing form via a user at the terminal device in the use of a browser together with an element of component type provided by the network server so as to conduct a request for browsing a document;
- (2) transmitting the browsing request via the browser to the network server over the network;
- (3) transmitting the browsing request via the network server to a document processing center of the network server after receiving the browsing request, and generating a response corresponding in category to the browsing request and initiating an associated service server via the document processing center;
- (4) searching in a service database of the service server for the document to be browsed via a document browsing program of the document processing center, and transmitting a searched result of the browsed document to the document processing center;
- (5) transmitting a form containing the searched result of the browsed document via the document processing center to the terminal device over the network; and
- (6) displaying a form containing the searched result of the browsed document via the browser of the terminal device.

3. A method for operating a workflow, applied to a system for operating a workflow having a terminal device, a network server and at least one service server, for conducting an electronic workflow for an enterprise based on a server/client architecture in a network environment; the method comprising the steps of:

- (1) inputting keywords to a reading form via a user at the terminal device in the use of a browser together with an element of component type provided by the network server so as to conduct a request for reading a document; and
- (2) searching in a document database of the terminal device for the document to be read in response to the input keywords, wherein if the read document is available from the document database, a form containing a searched result of the read document is displayed via the browser, or otherwise, a process for browsing a document is performed.

4. A method for operating a workflow, applied to a system for operating a workflow having a terminal device, a network server and at least one service server, for conducting an electronic workflow for an enterprise based on a server/client architecture in a network environment; the method comprising the steps of:

- (1) filling in an issuing form selected by a user at the terminal device with document data necessary for performing a request for issuing a document in the use of a browser together with an element of component type provided by the network server;
- (2) defining via the user a routing and a deadline at each checkpoint of the routing for examining the issuing form;
- (3) providing an examiner/parallel examiner and an agent for the examiner in the routing for examining the issuing form;
- (4) transmitting the issuing form of the browser to the network server over the network;
- (5) processing the issuing form via a document processing center of the network server in cooperation with the service server corresponding to the routing and examiner/parallel examiner for examining the issuing form;
- (6) transmitting a form containing an examined result of the issuing form via the

document processing center of the network server to the terminal device over the network; and

- (7) displaying a form containing the examined result of the issuing form via the browser of the terminal device, and storing the form containing the examined result of the issuing form in the browser of the terminal device if necessary.

5. The method of claim 4, wherein the step (5) further comprises the steps of:

(5-1) performing an assignment procedure for transmitting the issuing form to a first level unit of the enterprise according to content and a category of the issuing form after receiving the issuing form via the document processing center;

(5-2) determining via the first level unit if another first level unit is required for parallel examination for the issuing form, wherein if the parallel examination is necessary, then step (5-3) is followed, or else step (5-4) is followed;

(5-3) conducting the parallel examination for the issuing form, and then performing step (5-4) after the parallel examination being completed;

(5-4) conducting the examination for the issuing form via the first level unit;

(5-5) determining if the examination for the issuing form is completed, wherein if the examination is completed, then step (5-6) is followed, or else step (5-9) is followed;

(5-6) determining whether to store an examined result for the issuing form or to conduct a direct reply, wherein step (5-7) is followed if to store the examined result for the issuing form, and step (5-8) is followed if to conduct the direct reply;

(5-7) transmitting the examined result of the issuing form via the document processing center to the service server, which stores the examined result of the issuing form in a service database thereof, and then performing step (5-13);

(5-8) conducting the direct reply via the document processing center according to the examined result of the issuing form, and then performing step (5-13);

(5-9) determining if the issuing form expires the deadline for the examination, wherein if the issuing form is not overdue, then step (5-10) is followed, or else step (5-12) is followed;

(5-10) determining if the issuing form needs to be assigned to a second level unit for conducting the examination in serial with the first level unit, wherein of the second level unit is necessary, then step (5-11) is followed, or else step (5-5) is followed;

(5-11) conduct the examination of the issuing form via the second level unit and transmits an examined result of the issuing form to the first level unit, and then performing step (5-5);

(5-12) performing a re-assignment procedure via the document processing center for re-assigning the issuing form, which expires the examination deadline and is not completely examined, and then performing step (5-1); and

(5-13) terminating the examination via the document processing center of the network server together with the service server, according to the examination routing and examiner/parallel examiner for the issuing form.

6. The method of claim 4, wherein the step (5) further comprises the steps of:

(5-1) conducting a procedure of assignment, a direct reply, direct deletion or reassignment for the issuing form according to content and a category of the issuing form via the document processing center of the network server after receiving the issuing form, wherein if the assignment procedure is performed, then step (5-2) is followed; if the direct-reply procedure is conducted, then step (5-13) is followed; if the direct-deletion procedure is employed, then step (5-14) is followed; and if the re-assignment procedure is proceeded, then step (5-15) is followed;

(5-2) performing an assignment procedure for transmitting the issuing form to a first level unit of the enterprise according to the content and category of the issuing

form after receiving the issuing form via the document processing center;

(5-3) determining via the first level unit if another first level unit is required for parallel examination for the issuing form, wherein if the parallel examination is necessary, then step (5-4) is followed, or else step (5-5) is followed;

(5-4) conducting the parallel examination for the issuing form, and then performing step (5-5) after the parallel examination being completed;

(5-5) conducting the examination for the issuing form via the first level unit;

(5-6) determining if the examination for the issuing form is completed, wherein if the examination is completed, then step (5-7) is followed, or else step (5-10) is followed;

(5-7) determining whether to store an examined result for the issuing form or to conduct a direct reply, wherein step (5-8) is followed if to store the examined result for the issuing form, and step (5-9) is followed if to conduct the direct reply;

(5-8) transmitting the examined result of the issuing form via the document processing center to the service server, which stores the examined result of the issuing form in a service database thereof, and then performing step (5-16);

(5-9) conducting the direct reply via the document processing center according to the examined result of the issuing form, and then performing step (5-16);

(5-10) determining if the issuing form expires the deadline for the examination, wherein if the issuing form is not overdue, then step (5-11) is followed, or else step (5-15) is followed;

(5-11) determining if the issuing form needs to be assigned to a second level unit for conducting the examination in serial with the first level unit, wherein of the second level unit is necessary, then step (5-12) is followed, or else step (5-6) is followed;

(5-12) conduct the examination of the issuing form via the second level unit and

transmits an examined result of the issuing form to the first level unit, and then performing step (5-6);

(5-13) performing the direct-reply procedure via the document processing center for conducting a direct reply according to the issuing form, and then performing step (5-16);

(5-14) performing the direct-deletion procedure via the document processing center for directly deleting the issuing form, and then performing step (5-16);

(5-15) performing a re-assignment procedure via the document processing center for re-assigning the issuing form, which expires the examination deadline and is not completely examined, and then performing step (5-2); and

(5-16) terminating the examination via the document processing center of the network server together with the service server, according to the examination routing and examiner/parallel examiner for the issuing form.

7. A method for operating a workflow, applied to a system for operating a workflow having a terminal device, a network server and at least one service server, for conducting an electronic workflow for an enterprise based on a server/client architecture in a network environment; the method comprising the steps of:

(1)submitting a request for inquiring, browsing, issuing or reading a document via a user at the terminal device in the use of a browser together with an element of component type provided by the network server, wherein if the inquiry request is conducted, then step (2) is followed; if the browsing request is performed, then step (8) is followed; if the reading request is employed, then step (14) is followed; and if the issuing request is proceeded, then step (16) is followed;

(2)inputting keywords to an inquiry form via the user at the terminal device in the use of the browser together with the element of component type provided

- by the network server so as to conduct the inquiry request;
- (3)transmitting the inquiry request via the browser to the network server over the network;
- (4)transmitting the inquiry request via the network server to a document processing center of the network server after receiving the inquiry request, and generating a response corresponding in category to the inquiry request and initiating an associated service server via the document processing center;
- (5)searching in a service database of the service server for the document to be inquired via a document inquiring program of the document processing center, and transmitting a searched result of the inquired document to the document processing center;
- (6)transmitting a form containing the searched result of the inquired document via the document processing center to the terminal device over the network;
- (7)displaying a form containing the searched result of the inquired document via the browser of the terminal device;
- (8)inputting keywords to a browsing form via the user at the terminal device in the use of the browser together with the element of component type provided by the network server so as to conduct the browsing request;
- (9)transmitting the browsing request via the browser to the network server over the network;
- (10) transmitting the browsing request via the network server to the document processing center of the network server after receiving the browsing request, and generating a response corresponding in category to the browsing request and initiating an associated service server via the document processing center;

- (11) searching in a service database of the service server for the document to be browsed via a document browsing program of the document processing center, and transmitting a searched result of the browsed document to the document processing center;
- (12) transmitting a form containing the searched result of the browsed document via the document processing center to the terminal device over the network;
- (13) displaying a form containing the searched result of the browsed document via the browser of the terminal device;
- (14) inputting keywords to a reading form via the user at the terminal device in the use of the browser together with the element of component type provided by the network server so as to conduct the reading request;
- (15) searching in a document database of the terminal device for the document to be read in response to the input keywords, wherein if the read document is available from the document database, a form containing a searched result of the read document is displayed via the browser, or otherwise, step (8) is followed for document browsing;
- (16) filling in an issuing form selected by the user at the terminal device with document data necessary for performing the issuing request in the use of the browser together with the element of component type provided by the network server;
- (17) defining via the user a routing and a deadline at each checkpoint of the routing for examining the issuing form;
- (18) providing an examiner/parallel examiner and an agent for the examiner in the routing for examining the issuing form;
- (19) transmitting the issuing form of the browser to the network server over the network;

- (20) processing the issuing form via the document processing center of the network server in cooperation with the service server corresponding to the routing and examiner/parallel examiner for examining the issuing form;
- (21) transmitting a form containing an examined result of the issuing form via the document processing center of the network server to the terminal device over the network; and
- (22) displaying a form containing the examined result of the issuing form via the browser of the terminal device, and storing the form containing the examined result of the issuing form in the browser of the terminal device if necessary.

8. The method of claim 7, wherein the step (20) further comprises the steps of:

(20-1) performing an assignment procedure for transmitting the issuing form to a first level unit of the enterprise according to content and a category of the issuing form after receiving the issuing form via the document processing center;

(20-2) determining via the first level unit if another first level unit is required for parallel examination for the issuing form, wherein if the parallel examination is necessary, then step (20-3) is followed, or else step (20-4) is followed;

(20-3) conducting the parallel examination for the issuing form, and then performing step (20-4) after the parallel examination being completed;

(20-4) conducting the examination for the issuing form via the first level unit;

(20-5) determining if the examination for the issuing form is completed, wherein if the examination is completed, then step (20-6) is followed, or else step (20-9) is followed;

(20-6) determining whether to store an examined result for the issuing form or to conduct a direct reply, wherein step (20-7) is followed if to store the examined result for the issuing form, and step (20-8) is followed if to conduct the direct reply;

(20-7) transmitting the examined result of the issuing form via the document

processing center to the service server, which stores the examined result of the issuing form in a service database thereof, and then performing step (20-13);

(20-8) conducting the direct reply via the document processing center according to the examined result of the issuing form, and then performing step (20-13);

(20-9) determining if the issuing form expires the deadline for the examination, wherein if the issuing form is not overdue, then step (20-10) is followed, or else step (20-12) is followed;

(20-10) determining if the issuing form needs to be assigned to a second level unit for conducting the examination in serial with the first level unit, wherein of the second level unit is necessary, then step (20-11) is followed, or else step (20-5) is followed;

(20-11) conduct the examination of the issuing form via the second level unit and transmits an examined result of the issuing form to the first level unit, and then performing step (20-5);

(20-12) performing a re-assignment procedure via the document processing center for re-assigning the issuing form, which expires the examination deadline and is not completely examined, and then performing step (20-1); and

(20-13) terminating the examination via the document processing center of the network server together with the service server, according to the examination routing and examiner/parallel examiner for the issuing form.

9. The method of claim 7, wherein the step (20) further comprises the steps of:

(20-1) conducting a procedure of assignment, a direct reply, direct deletion or reassignment for the issuing form according to content and a category of the issuing form via the document processing center of the network server after receiving the issuing form, wherein if the assignment procedure is performed, then step (20-2) is followed; if the direct-reply procedure is conducted, then step (20-13) is followed; if

the direct-deletion procedure is employed, then step (20-14) is followed; and if the re-assignment procedure is proceeded, then step (20-15) is followed;

(20-2) performing an assignment procedure for transmitting the issuing form to a first level unit of the enterprise according to the content and category of the issuing form after receiving the issuing form via the document processing center;

(20-3) determining via the first level unit if another first level unit is required for parallel examination for the issuing form, wherein if the parallel examination is necessary, then step (20-4) is followed, or else step (20-5) is followed;

(20-4) conducting the parallel examination for the issuing form, and then performing step (20-5) after the parallel examination being completed;

(20-5) conducting the examination for the issuing form via the first level unit;

(20-6) determining if the examination for the issuing form is completed, wherein if the examination is completed, then step (20-7) is followed, or else step (20-10) is followed;

(20-7) determining whether to store an examined result for the issuing form or to conduct a direct reply, wherein step (20-8) is followed if to store the examined result for the issuing form, and step (20-9) is followed if to conduct the direct reply;

(20-8) transmitting the examined result of the issuing form via the document processing center to the service server, which stores the examined result of the issuing form in a service database thereof, and then performing step (20-16);

(20-9) conducting the direct reply via the document processing center according to the examined result of the issuing form, and then performing step (20-16);

(20-10) determining if the issuing form expires the deadline for the examination, wherein if the issuing form is not overdue, then step (20-11) is followed, or else step (20-15) is followed;

(20-11) determining if the issuing form needs to be assigned to a second level

unit for conducting the examination in serial with the first level unit, wherein of the second level unit is necessary, then step (20-12) is followed, or else step (20-6) is followed;

(20-12) conduct the examination of the issuing form via the second level unit and transmits an examined result of the issuing form to the first level unit, and then performing step (20-6);

(20-13) performing the direct-reply procedure via the document processing center for conducting a direct reply according to the issuing form, and then performing step (20-16);

(20-14) performing the direct-deletion procedure via the document processing center for directly deleting the issuing form, and then performing step (20-16);

(20-15) performing a re-assignment procedure via the document processing center for re-assigning the issuing form, which expires the examination deadline and is not completely examined, and then performing step (20-2); and

(20-16) terminating the examination via the document processing center of the network server together with the service server, according to the examination routing and examiner/parallel examiner for the issuing form.

10. A system for operating a workflow for conducting an electronic workflow for an enterprise based on a server/client architecture in a network environment, comprising:

a terminal device for allowing a user at the terminal device to submit a request for inquiring, browsing, issuing or reading a document in the use of a browser of the terminal device together with an element of component type provided by a network server, and for transmitting the inquiry, browsing or issuing request to the network server;

a network server for transmitting the request to a document processing center thereof after receiving the request from the terminal device, wherein the document

processing center generates a response corresponding in category to the request and then initiate an associated service server; and

at least one service server for processing the request in cooperation with a service database thereof so as to obtain a processed result of the request, which is transmitted through the network server to the user at the terminal device.

11. The system of claim 10, wherein the service server is a MS exchange server.
12. The system of claim 10, wherein the service server is a MS SMTP server.
13. The system of claim 10, wherein the service server is a MS SQL server.
14. The system of claim 10, wherein the service server is an ORACLE server.
15. The system of claim 10, wherein the network environment is internet.
16. The system of claim 10, wherein the network environment is intranet.